TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective July 1, 2011
WIN-423

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **December 2013**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Heritage Traditional Wood Operating Casement Windows, Individual, Impact Resistant, manufactured by

Kolbe & Kolbe Millwork Co., Inc.
1323 South Eleventh Avenue
Wausau, WI 54401
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will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The wood operating casement windows evaluated in this report are individual, impact resistant windows. This product evaluation report is for wood operating casement windows based on the following tested constructions:

General Description:

System	Description	Rating	Hallmark Certification
1	Heritage Casement; Impact Resistance to Missile Level D, Wind Zone 3	C-C65 36 x 72 CW-PG65 36x72-C	413-H-1040.00 413-H-1040.01 413-H-1040.02
2	Heritage Casement; Impact Resistance to Missile Level D, Wind Zone 4	C-C65 36 x 72 CW-PG65 36x72-C	413-H-1086.00 413-H-1086.01 413-H-1086.02

Product Dimensions:

System	Overall Size	Sash Size	Glass Size
1	36" x 72"	34 1/16" x 70 1/16"	30 1/4" x 67 1/4"
2	36" x 72"	34 1/16" x 70 1/16"	30 1/4" x 67 1/4"

Glazing Description:

System	Glass Construction [1]	Glazing Method [2]
1	IG-1	GM-1
2	SG-1	GM-1

Note: [1] See the "Glass Construction Key" for the glass construction.
[2] See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

IG-1: Sealed insulating glass unit. The sealed insulating glass unit is comprised of a laminated glass unit and a double strength ($\frac{1}{8}$") annealed glass lite that are separated by a desiccant filled stainless steel spacer system. The laminated glass unit is comprised of two $\frac{5}{32}$" annealed glass lites separated by a 0.090" SGP interlayer. The glass thickness in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

SG-1: Single glazed with a laminated glass unit. The laminated glass unit is comprised of two $\frac{5}{32}$" annealed glass lites separated by a 0.090" PVB and 0.007" PET interlayer. The glass thickness in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The insulating glass unit and the laminated glass unit are set from the interior onto a bed of structural silicone sealant. Another interior bead of structural silicone sealant is applied at the interior edge of the laminated glass unit around the perimeter and a vinyl bracket is installed into kerfs in the sash. Wood glazing stops are secured with brads spaced 2 inches from each corner and 6-8 inches on center.

Frame Construction: The frame members consist of molded pine. The frame corners are rabbeted, butted, sealed with silicone, and secured with staples. Interior wood jamb stops are utilized at the head, sill, and jambs. They are secured with staples spaced 2 inches from each end and 10 inches on center. **Brickmould:** A brickmould is secured to the side jambs and head with fasteners spaced 3 inches from each end and 10 inches on center. The brickmould is mitered and secured with two nails per corner. The sill nosing is secured to brickmould with one screw per corner and to the frame sill with glue and nails spaced 2 inches from each end and 10 inches on center.

Sash Construction: The sash members consist of a maple core with a pine veneer. The sash corners are mortise and tenon construction and secured with brad nails.

Hardware:

- Ashland single actuated 3-point lock with metal keepers; Two (2) required; Located on the lock side jamb.
- Tri-Euro hinges; Four (4) required; Located on the hinge side.
- Truth Encore heavy 14" single arm operator with track; One (1) required; Located on the hinge side of the frame sill and the sash.
- Concealed two-piece snubber; Three (3) required; Located on the hinge stile/frame and the sash.
- Adjustable casement hinge; Two (2) required; Located on the head and the sill.

Product Identification: A certification program label (WDMA Hallmark Certified) will be affixed to the assembly. The certification program label includes the manufacturer's name; product name; performance characteristics; the approved inspection agency (WDMA); and the following applicable standards: AAMA/WDMA 101/I.S.2/A440-05, AAMA/WDMA 101/I.S.2/A440-05, and ASTM E 1886 and ASTM E 1996.

LIMITATIONS

Design pressures (DP):

System	Overall Width (in.)	Overall Height (in.)	Design Pressure (psf)
1	36	72	± 65
2	36	72	+65/-70

Impact Resistance: These window assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I zone** and the **Seaward zone**. The window assemblies passed Missile Level D specified in ASTM E 1996-05. The window assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These window assemblies will not need to be protected with an impact protective system.

Higher Negative Design Pressure: The WDMA Hallmark Certified label indicates the product was tested to a higher negative design pressure. The higher negative design pressure is indicated in the table above.

Acceptance of Smaller Assemblies: Window assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The window assembly shall be prepared and installed in accordance with the manufacturers recommended installation instructions. Detailed installation drawings are available from the manufacturer.

Installation

Option 1 (Installation Clip): The window assembly shall be fastened to minimum Southern Yellow Pine lumber. The window assembly is secured to the wall framing using Kolbe & Kolbe metal installation clips. The installation clips (20 gauge x 10 1/16" x 1 5/8") are secured to the window side jambs, head, and sill. The clips are secured to the window frame with two (2) No. 8 x 3/4" screws. The clips are secured to the wall framing with one (1) No. 8 x 1 1/4" screw. The fasteners shall be long enough to penetrate a minimum of 1 1/4" into the wall framing. The spacing of the clips is specified in the table below.

Installation Clip Spacing:

System	Distance From Each Corner Side Jambs	Distance From Each Corner Head and Sill	Head (on center spacing)	Sill (on center spacing)	Side Jambs (on center spacing)
1	14 7/16"	18"	18"	18"	14 7/16"
2	14 7/16"	18"	18"	18"	14 7/16"

Option 2 (Frame Installation): The window assembly is secured to the wall framing using the frame of the window with minimum No. 10 x 2 ½" screws. All fasteners shall be long enough to penetrate a minimum of 1 ½" into the wall framing. The spacing of the fasteners is specified in the table below.

Fastener Spacing:

System	Distance From Each Corner Side Jambs	Distance From Each Corner Head and Sill	Head (on center spacing)	Sill (on center spacing)	Side Jambs (on center spacing)
1	12"	12"	12"	12"	12"
2	12"	12"	12"	12"	12"

Brickmould (Systems 1-2): The brickmould shall be secured to the wall framing with minimum 2" long T-nails spaced approximately 24 inches on center along all four sides.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.